

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Xian Chang Li et al.                      Art Unit : *Unknown*  
Serial No. : *Not Yet Assigned*                      Examiner : *Unknown*  
Filed : *Herewith*  
Title : MODULATION OF IL-2 AND IL-15 MEDIATED T CELL RESPONSES

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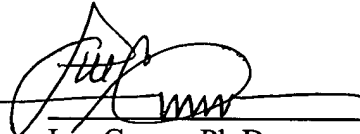
INFORMATION DISCLOSURE STATEMENT

Under 35 USC §120, this application relies on the earlier filing date of application serial number 09/953,323, filed on September 14, 2001. All references listed on the attached form PTO-1449 were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application:

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: December 30, 2003



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Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>13985-057002</b>	Application No. <i>not yet assigned</i>
	Applicant <b>Xian Chang Li et al.</b>		
	Filing Date <i>herewith</i>	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,892,001	04/06/99	Grabstein et al.			
	AB	5,747,024	05/05/98	Grabstein et al.			
	AC	5,707,616	01/13/98	Grabstein et al.			
	AD	5,574,138	11/12/96	Grabstein et al.			
	AE	5,552,303	09/03/96	Grabstein et al.			
	AF	5,011,684	Apr. 20, 1991	Strom			
	AG	5,116,964	May 26, 1992	Capon, et al			
	AH	5,552,303	Sept. 3, 1996	Grabstein, et al			
	AI	5,574,138	Nov. 12, 1996	Grabstein, et al			
	AJ	5,707,616	Jan. 13, 1998	Grabstein, et al			
	AK	5,747,024	May 5, 1998	Grabstein, et al			
	AL	5,892,001	Apr. 6, 1999	Grabstein, et al			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AM	198 23 351 A1	13.5.98	Germany				
	AN	WO 88/07089	22 Sept 1988	WIPO				
	AO	WO 92/12726	6 Aug 1992	WIPO				
	AP	WO 94/06473	31 Mar 1994	WIPO				
	AQ	WO 96/26274	29 Aug 1996	WIPO				
	AR	WO 97/41232	6 Nov 1997	WIPO				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AS	Armitage, et al. <i>IL-15 Has Stimulatory Activity for the Induction of B Cell Proliferation and Differentiation</i> . Journal of Immunology 154:483-490 (1995).
	AT	Brekke, et al. <i>Structure-Function Relationships of Human IgG</i> . The Immunologist 2(4):125-130 (1994).

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	AU	Agostini, et al. <i>CD8 T-Cell Infiltration in Extravascular Tissues of Patients with Human Immunodeficiency Virus Infection. Interleukin-15 Upmodulates Costimulatory Pathways Involved in the Antigen-Presenting Cells-T-Cell Interaction.</i> Blood 93(4):1277-1286 (1999).
	AV	Anderson, et al. <i>Functional Characterization of the Human Interleukin-15 Receptor <math>\alpha</math> Chain and Close Linkage of IL15RA and IL2RA Genes.</i> Journal of Biological Chemistry 270(50):29862-29869 (1995).
	AW	Bamford, et al. <i>The interleukin (IL) 2 receptor <math>\beta</math> chain is shared by IL-2 and a cytokine, provisionally designated IL-T, that stimulates T-cell proliferation and the induction of lymphokine-activated killer cells.</i> Proc. Natl. Acad. Sci. USA 91:4940-4944 (1994).
	AX	Burger, et al. <i>Imbalance between interstitial collagenase and tissue inhibitor of metalloproteinases 1 in synovocytes and fibroblasts upon direct contact with stimulated T Lymphocytes.</i> Arthritis & Rheumatism 41(10):1748-1759 (1998).
	AY	Burton, et al. <i>A lymphokine, provisionally designated interleukin T and produced by a human adult T-cell leukemia line, stimulates T-cell proliferation and the induction of lymphokine-activated killer cells.</i> Proc. Natl. Acad. Sci. USA 91:4935-4939 (1994).
	AZ	Carson, et al. <i>Interleukin (IL) 15 Is a Novel Cytokine That Activates Human Natural Killer Cells via Components of the IL-2 Receptor.</i> J. Exp. Med. 180:1395-1403 (1994).
	AAA	Case, et al. <i>Chimeric cytotoxin IL2-PE40 delays and mitigates adjuvant-induced arthritis in rats.</i> Proc. Natl. Acad. Sci. USA 86:287-291 (1989).
	ABB	Chae, et al. <i>Distribution of IL-15 Receptor <math>\alpha</math>-Chains on Human Peripheral Blood Mononuclear Cells and Effect of Immunosuppressive Drugs on Receptor Expression.</i> Journal of Immunology 157:2813-2819 (1996).
	ACC	Chae, et al. <i>Mutant IL-15 Protein Exerting Antagonistic Effects on IL-15 Triggered Cell Proliferation.</i> JASN 7(9):1654 (1996).
	ADD	Chang et al., "Blocking the common gamma chain of cytokine receptors induces T cell apoptosis and long term islet allograft survival," <i>J. Immunol.</i> 164:1193-1199 (2000)
	AEE	Courtenay, et al. <i>Immunisation against heterologous type II collagen induces arthritis in mice.</i> Nature 283(5748): 666-668 (1980).
	AFF	Elliott, et al. <i>Repeated therapy with monoclonal antibody to tumor necrosis factor <math>\alpha</math> (cA2) in patients with rheumatoid arthritis.</i> Lancet 344(8930):1125-1127 (1994).
	AGG	Elliott, et al. <i>Randomized double-blind comparison of chimeric monoclonal antibody to tumour necrosis factor <math>\alpha</math> (cA2) versus placebo in rheumatoid arthritis.</i> Lancet 344(8930):1105-1110 (1994).
	AHH	Ferrari-Lacraz, et al. <i>An Antagonist IL-15/Fc Protein Prevents Costimulation Blockade-Resistant Rejection.</i> Journal of Immunology 167:3478-3485 (2001).
	AII	Giri, et al. <i>Utilization of the <math>\beta</math> and <math>\gamma</math> chains of the IL-2 receptor by the novel cytokine IL-15.</i> The EMBO Journal 13(12):2822-2830 (1994).
	AJJ	Giri, et al. <i>Identification and cloning of a novel IL-15 binding protein that is structurally related to the <math>\alpha</math> chain of the IL-2 receptor.</i> The EMBO Journal 14(15):3654-3663 (1995).
	AKK	Giri, et al. <i>IL-15, a novel T cell growth factor that shares activities and receptor components with IL-2.</i> Journal of Leukocyte Biology 57(5):763-766 (1995).
	ALL	Grabstein, et al. <i>Cloning of a T Cell Growth Factor That Interacts with the <math>\beta</math> Chain of the Interleukin-2 Receptor.</i> Science 264:965-968 (1994).

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	AMM	Hatakeyama, et al. <i>A Restricted Cytoplasmic Region of IL-2 Receptor <math>\beta</math> Chain Is Essential for Growth Signal Transduction but Not for Ligand Binding and Internalization.</i> Cell 59:837-845 (1989).
	ANN	Kim, et al. <i>Targeting the IL-15 Receptor with an Antagonist IL-15 Mutant/Fc<math>\gamma</math>2a Protein Blocks Delayed-Type Hypersensitivity.</i> Journal of Immunology 160:5742-5748 (1998).
	AOO	Kim, et al. <i>Targeting the IL-15 Receptor with an Antagonist IL-15/Fc<math>\gamma</math>2a Protein Blocks DTH and Enhances the Acceptance of Islet Allografts.</i> 17 <sup>th</sup> ASTP (Physicist) Annual Meeting, Chicago, IL May 9-13, 1998 (p. 713).
	APP	Kim, et al. <i>Immunoglobulin-Cytokine Fusion Molecules: The New Generation of Immunomodulating Agents.</i> Transplantation Proceedings 30:4031-4036 (1998).
	AQQ	Li, et al. <i>Blocking both signal 1 and signal 2 of T-cell activation prevents apoptosis of alloreactive T cells and induction of peripheral allograft tolerance.</i> Nature Medicine 5(11):1298-1302 (1999).
	ARR	Li, et al. <i>Induction of Allograft Tolerance in the Absence of Fas-Mediated Apoptosis.</i> Journal of Immunology 163:2500-2507 (1999).
	ASS	Lin, et al. <i>The Role of Shared Receptor Motifs and Common Stat Proteins in the Generation of Cytokine Pleiotropy and Redundancy by IL-2, IL-4, IL-7, IL-13, and IL-15.</i> Immunity, 2:331-339 (Apr. 1995).
	ATT	Lin, et al. <i>The Role of Shared Receptor Motifs and Common Stat Proteins in the Generation of Cytokine Pleiotropy and Redundancy by IL-2, IL-4, IL-7, IL-13, and IL-15.</i> Immunity, 2:331-339 (Apr. 1995).
	AUU	Maslinski, et al. <i>Intoxication of high affinity IL-2 receptor positive thymocytes blocks early stages of T cell maturation.</i> International Immunology 4(4):509-517 (1992).
	AVV	Maslinski, et al. <i>Interleukin-2 (IL-2) Induces Tyrosine Kinase-dependant Translocation of Active Raf-1 from the IL-2 Receptor into the Cytosol.</i> Journal of Biological Chemistry 267(22):15281-15284 (1992).
	AWW	Moreland, et al. <i>Treatment of Rheumatoid Arthritis with a Recombinant Human Tumor Necrosis Factor Receptor (p75)-Fc Fusion Protein.</i> N. Engl. J. Med 337(3):141-147 (1997).
	AXX	Morrison, et al. <i>Structural Determinants of Human IgG Function.</i> The Immunologist 2(4):119-124 (1994).
	AYY	Morrison, et al. <i>Structural Determinants of Human IgG Function.</i> The Immunologist 2(4):119-124 (1994).
	AZZ	Pettit, et al. <i>Polyethylene Glycol Conjugation to Lysine Residues of Recombinant IL-15 Generates a Specific IL-15 Antagonist.</i> Proceed. Intern. Symp. Control. Rel. Bioact. Mater. 22:496-497 (1995).
	AAAA	Pettit, et al. <i>Structure-Function Studies of Interleukin 15 using Site-specific Mutagenesis, Polyethylene Glycol Conjugation, and Homology Modeling.</i> The Journal of Biological Chemistry 272(4): 2312-2318 (1997).
	ABBB	Remillard, et al. <i>Interleukin-2 Receptor Regulates Activation of Phosphatidylinositol 3-Kinase.</i> Journal of Biological Chemistry 266(22):14167-14170 (1991).
	ACCC	Stevens, et al. <i>Interleukin-15 signal, T84 colonic epithelial cells in the absence of the interleukin-2 receptor <math>\beta</math>-chain.</i> Am. J. Physiol. 272:G1-G8 (1997).
	ADDD	Stunkel, et al. <i>Monitoring of interleukin-2 receptor (IL-2R) expression in vivo and studies on an IL-2R-directed immunosuppressive therapy of active and adoptive adjuvant-induced arthritis in rats.</i> Immunology 64:683-689 (1988).

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	AEEE	Vey, et al. <i>IFN-<math>\gamma</math> and 1,25(OH)<math>_2</math>D<math>_3</math> Induce on THP-1 Cells Distinct Patterns of Cell Surface Antigen Expression, Cytokine Production, and Responsiveness to Contact with Activated T Cells.</i> Journal of Immunology 149(6):2040-2046 (1992).
	AFFF	Williams, et al. <i>Design, synthesis and expression of a human interleukin-2 gene incorporating the codon usage bias found in highly expressed Escherichia coli genes.</i> Nucleic Acids Research 16(22):10453-10467 (1988).
	AGGG	Williams, et al. <i>Structure/Function Analysis of Interleukin-2-Toxin (DAB<math>_{\text{ARG}}</math>-IL-2).</i> Journal of Biological Chemistry 265(20):11885-11889 (1990).
	AHHH	Williams, et al. <i>Successful therapy of collagen-induced arthritis with TNF receptor-Ifg fusion protein and combination with anti-CD4.</i> Immunology 84(3): 433-439 (1995).
	AIII	Wooley, et al. <i>Influence of a Recombinant Human Soluble Tumor Necrosis Factor Receptor FC Fusion Protein on Type II Collagen-Induced Arthritis in Mice.</i> Journal of Immunology 151(11):6442-6607 (1993).
	AJJJ	Zurawski, et al. <i>Definition and spatial location of mouse interleukin-2 residues that interact with its heterotrimeric receptors.</i> The EMBO Journal 12(13):513-5119 (1993).

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